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# USDA grades for feeder cattle

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## Determining Feeder Cattle Grades

According to current USDA standards, feeder cattle grades are determined by evaluating thriftiness, frame size and muscle thickness.

**Thriftiness.** Thriftiness refers to an animal's ability to grow and develop rapidly and efficiently. Thrifty feeder cattle appear to be healthy and are expected to grow and develop to the maximum of their potential, while unthrifty feeder cattle are not expected to perform normally because of various possible environmental or genetic factors (e.g., disease, parasitism, severe nutritional restriction or deficiency, dwarfism, etc).

Unthrifty feeder cattle are graded U.S. Inferior regardless of their frame size or muscle thickness. Likewise, "double-muscled" cattle are graded Inferior because they are not expected to deposit sufficient quantities of intramuscular fat (marbling) to produce U.S. Choice carcasses.

Thrifty feeder cattle are assigned to one of nine grades based on separate evaluations of frame size and muscle thickness. The grades for thrifty feeder cattle are as follows: Large No. 1, Large No. 2, Large No. 3, Medium No. 1, Medium No. 2, Medium No. 3, Small No. 1, Small No. 2, Small No. 3.

**Frame size.** The frame size portion of the grade (large, medium or small) is determined by evaluating an animal's skeletal size (height and length) in relation to its maturity (see Figure 1). By definition, feeder cattle frame size is directly related to differences in mature size, and is therefore related to differences in rate of growth and development among feeder cattle of similar ages. Because of the differences in mature size that exist between cattle of various breeds, it becomes apparent that frame size is breed related; however, considerable variation in mature size also exists within breeds. Therefore, it should be emphasized that evaluations of feeder cattle frame size are intended to reflect differences in size and potential for growth within breeds as well as between breeds.

Frame size also is intended to be indicative of the weight at which a feeder animal will produce a carcass of a given grade. Among cattle with average muscle thickness, small-, medium- and large-framed steers are expected to produce U.S. Choice carcasses and/or possess .50-inch (1.3-centimeters) external fat thickness at the 12th rib at live weights of less than 1,000 pounds (454 kilograms), 1,000 to 1,200 pounds (454-544 kg), and over 1,200 pounds (544 kg), respectively.

### Quick Facts

The U.S. Department of Agriculture revised the official U.S. standards for grades of feeder cattle in an effort to develop a more useful grading system.

The revised feeder cattle grade standards are designed to be more descriptive of the various types of feeder cattle being produced.

USDA grades for feeder cattle are determined by evaluating animal frame size, muscle thickness and thriftiness.

The grades for thrifty feeder cattle include separate designations for frame size (*large frame, medium frame or small frame*) and muscle thickness (*No. 1, No. 2, or No. 3*).

Feeder cattle that are unthrifty or those that are "double muscled" are graded *Inferior*.

A feeder cattle grading system is intended for use as a marketing tool to facilitate the segregation of a large heterogeneous population of feeder cattle into smaller more homogeneous groups, which are given a common description based on value or end use.

On September 2, 1979 the U.S. Department of Agriculture revised the official U.S. standards for grades of feeder cattle in an effort to develop a more useful feeder grading system that would reflect the needs of the cattle industry. The former feeder cattle grade standards, which were adopted in 1964, had been used as the basis for USDA market news reports and for certifying the grade of feeder cattle delivered on future contracts. However, they were seldom used by the industry for regular daily feeder cattle transactions.

Furthermore, the former standards were based on out-dated grade factors that 1) did not provide an adequate description of the current feeder cattle population, 2) gave no indication of the growth potential of feeder cattle, and 3) were unrelated to subsequent grades for slaughter cattle and beef carcasses.

The revised feeder cattle grade standards are designed to be more descriptive of the various types of feeder cattle that presently are being produced and provide a basis for stratifying feeder cattle into groups that are more uniform in market value, growth potential and optimal slaughter weight.

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To simplify technical terminology, trade names of products and equipment occasionally will be used. No endorsement of products named is intended nor is criticism implied of products not mentioned.

It should be pointed out that these weight endpoints would be higher for very thickly muscled feeder steers and lower for thinly muscled feeder steers. In addition, heifers are expected to produce carcasses of a given grade at substantially lighter weights than their steer counterparts, because they tend to be earlier maturing than steers of the same frame size. Typically muscled, small, medium and large framed heifers would be expected to produce U.S. Choice carcasses and/or possess .50-inch (1.3-cm) external fat thickness at the 12th rib at live weights of less than 850 pounds (386 kg), 850 to 1,000 pounds (386-454 kg), and over 1,000 pounds (454 kg), respectively.

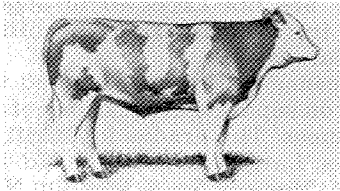
**Muscle thickness.** Muscle thickness (No. 1, No. 2 or No. 3) is determined by evaluating the thickness and plumpness of muscling in relation to actual skeletal size (see Figure 2) and is intended to reflect differences in ribeye area and carcass ratio of muscle to bone as they relate to ultimate differences in yield of boneless, closely trimmed retail cuts.

The USDA standards for grades of feeder cattle provide descriptions of muscle thickness based on a "slightly thin" covering of fat. However, as they are applied, evaluations of muscle thickness are subject to bias due to differences in condition among feeder cattle. Cattle carrying considerable finish may appear to have a higher degree of muscle thickness than they actually possess, whereas cattle that are in very thin condition

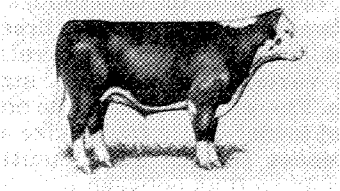
may be inherently more muscular than they appear to be. Therefore, determinations of muscle thickness are designed to include subjective allowances or adjustments for the effects of greater or lesser degrees of fatness.

In making these allowances, it should be recognized that cattle deposit fat at a relatively faster rate over the loin and back and in the flank, twist and brisket than they do through the rear quarter and forearm. In order to evaluate muscle thickness with the highest degree of accuracy, the body areas that are affected least by variations in fatness should receive the greatest emphasis in determining the muscle thickness of feeder cattle.

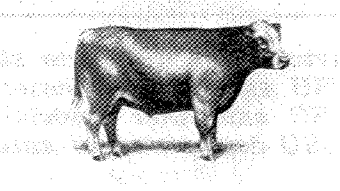
A feeder cattle grading system is intended for use as a marketing tool to facilitate the segregation of a large heterogeneous population of feeder cattle into smaller more homogeneous groups, which are given a common description based on value or end use. Within the current USDA system for grading feeder cattle, evaluations of frame size and muscle thickness provide an adequate market description of all types of feeder cattle produced, reflect differences in the value of feeder cattle to the various production phases of the beef industry, and describe cattle in a manner that is both simple and practically meaningful to the cattle industry.



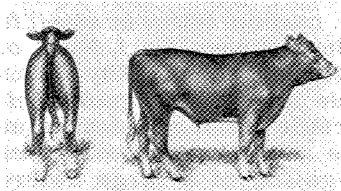
**Figure 1: Large Frame (L).** Feeder cattle that possess typical minimum qualifications for this grade are thrifty, have large frames, and are tall and long-bodied for their age. Steers and heifers would not be expected to produce U.S. Choice carcasses until their live weights exceed 1200 and 1000 pounds, respectively.



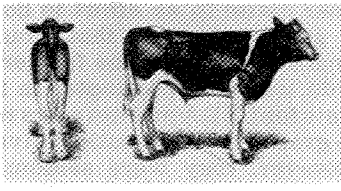
**Figure 2: Medium Frame (M).** Feeder cattle that possess typical minimum qualifications for this grade are thrifty, have slightly large frames, and are slightly tall and slightly long-bodied for their age. Steers and heifers would be expected to produce U.S. Choice carcasses at live weights of 1000 to 1200 pounds and 850 to 1000 pounds, respectively.



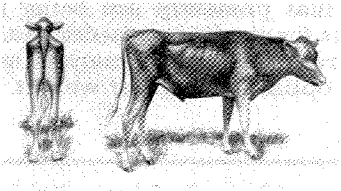
**Figure 3: Small Frame (S).** Feeder cattle included in this grade are thrifty, have small frames, and are shorter bodied and not as tall as specified as the minimum for the Medium Frame grade. Steers and heifers would be expected to produce U.S. Choice carcasses at live weights of less than 1000 and 850 pounds, respectively.



**Figure 4: No. 1.** Feeder cattle that possess minimum qualifications for this grade usually show a high proportion of beef breeding. The animals must be thrifty and slightly thick throughout; they are slightly thick and full in the forearm and gaskin, showing a rounded appearance through the back and loin with moderate width between the legs, both front and rear. Cattle show this thickness with a slightly thin covering of fat; however, cattle eligible for this grade may carry varying degrees of fat.



**Figure 5: No. 2.** Feeder cattle that possess minimum qualifications for this grade are thrifty and are narrow through the forequarter and the middle part of the rounds. The forearm and gaskin are thin and the back and loin have a sunken appearance. The legs are set close together, both front and rear. Cattle show this narrowness with a slightly thin covering of fat; however, cattle eligible for this grade may carry varying degrees of fat.



**Figure 6: No. 3.** Feeder cattle included in this grade are thrifty animals that have less thickness than the minimum requirements specified for the No. 2 grade.